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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,095	Applicant(s) VAN ASTEN ET AL.
	Examiner DAVID E. HARVEY	Art Unit 2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 April 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 25 April 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
6) Other: _____

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The following "prior art" is noted:

A) Japanese Patent Document #09/259438 to Matoba [machine generated translation attached hereto]:

Matoba has been cited because it evidenced the fact that those skilled in the multi-layer optical disc recording art had recognized the desire/need to align the recorded data at the transition/switching point between the respective layers in order to minimize access time. In the case that the amount of data is too large to be recorded on a single layer, Matoba teaches that the desired alignment was known to have been provided by:

1) Dividing the data to be recorded into a number of equal portions wherein the number of equal portions corresponds to the number of layers of the disc that are used to record the data:

and

2) To record each of the equal portions on a respective layer whereby the beginning and ends of the respective equal portions, when recorded, are "vertically" aligned across the layers.

[e.g., Note Figures 4(c) and 5(c); and paragraphs 0009 and 0019-0021 of the attached translation]

As is evident from Figures 4(c) and 5(c) of Matoba (and the discussion related thereto), the recording process discussed above results in aligned unused "spare" portions on each of the layers; i.e., *inherently, these unused "spare" portions are either left vacant or are "filled" with some type of null/dummy/fill data.*

B) US Patent #7,184,377 to Ito et al.

As in the case of Matoba et al. above, Ito et al. likewise evidences the fact that those skilled in the multi-layer optical disc recording art had recognized the desire/need to align the recorded data at the transition/switching point between the respective layers of the disc [SEE: lines 12-31 of column 11]. In the case that unequal amounts of data are to be recorded on a two layer optical disc, Ito et al. evidences that it was known to have adjusted the size of the unused "space" portions of the respective layers to align the recorded data at the transition/switching point between the respective layers of the disc [SEE: lines 12-31 of column 11].

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 4 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A) As recited, claim 4 appears to be directed to, or at least inclusive of, a computer program per se. A computer program, per se, constitutes non-functional descriptive material; i.e., not a process, machine, manufacture, or composition of matter as required by Section 101.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al.

I. The showing of Ito et al:

- A) See part "B" of paragraph 2 of this Office action;
- B) As is shown in Figure 18, Ito et al disclosed a system for recording data onto a recording medium (@ 50) wherein, as shown in Figure 4A to 4C, the recording medium comprises:
 - 1) First and second layers (e.g., @ 43 and 44 of the Figures) having respective opposing tracks contained thereon (e.g., @ Figures 4A and 4B);
 - 2) Wherein, as shown in Figure 4C, the respective tracks comprises respective recording areas separated by an intermediate middle area (e.g., @ 7).

As is illustrated in Figure 6, in operation, the system of Figure 18 is adapted to:

- 1) Respectively record a first amount of data (e.g., @ 15) followed by a second amount of data (@ 16) on respective layers of the recording medium (@ 51 and 52) wherein, as illustrated, the respective amounts of data may be different;

2) Adapting the size of the recorded data in each of the layers to fit the available storage areas of the respective layers in an aligned fashion by generating and recording the illustrated "space" areas of determined sizes (@ 105, 106, 106' and 107), including additional intermediate areas (@ 106 and 106'), before and after the data areas.

The examiner takes the following positions:

1) With respect to the step of "receiving a command for recording" recited in line 15 of claim 1:

a) The examiner maintains that the structure shown in Figure 18 of Ito et al inherently receives such a command, e.g., via a user input, when the data shown in Figure 6 is recorded; i.e., recording devices do not record data randomly;

and

2) With respect to the "steps" recited in lines 20-13 of claim 1:

a) The examiner maintains these steps simply set forth steps that are required to generate the recorded data structure illustrated in Figure 6 of Ito et al

II. Differences & Obviousness:

Claim 1 differs from the showing of Ito et al only in that claim 1 recites that the second amount of data is greater than the first amount of data, whereas in Ito et al., the first amount is illustrated as being greater than the second amount (see Figure 6). The examiner maintains, however, that Figure 6 of Ito et al. was provided only for illustrative purposes and was not limiting and, as such, that one skilled in the art would have recognized the obviousness of having stored data in which the second amount was greater than the first.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al. for the same reasons that were set forth above for claim 1. Additionally:

As is illustrated in Figure 6 of Ito et al., the respective portions of the recorded data on the recording medium are at least partitioned logically (if not physically).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 1, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

- 1) Claim 3 further differs from Ito et al. in that claim 3 recites that a part of the second data is recorded with the first data.
- 2) Matoba discloses a system as was set forth above in part "A" of paragraph 2. More specifically, Matoba described a process in which the data to be recorded on the recording medium was divided into equal parts/portions and then the divided portions were recorded on the respective layers [i.e., @ Figure 4(c) and 5(c)]. As shown, this results in part of the data portion of largest amount being recorded with the data of lesser amount.
- 3) The examiner maintained that it would have been obvious to have modified the system of Ito et al. to divide the data in accordance with the teachings of Matoba to align both the head and tail portions of the recorded data in a vertical direction across layers. Such a modification would have provided significant advantages in systems having more than two layers [e.g., note figure 5(c)] wherein transitions between the layers occur at both ends of the data.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al. for the same reasons that were set forth above for claim 1. Additionally:

The examiner maintains that it would have been obvious to have implemented the recording system via a computer program given the notoriously well known benefit thereof (e.g., such as reduced production costs).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al. for the same reasons that were set forth above for claim 1. Additionally:

Note the structure of the recording device shown in Figure 18 of Ito et al.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al. for the same reasons that were set forth above for claim 5. Additionally:

As is illustrated in Figure 6 of Ito et al., the respective portions of the recorded data on the recording medium are at least partitioned logically (if not physically).

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 5, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

- 1) Claim 7 further differs from Ito et al. in that claim 7 recites that a part of the second data is recorded with the first data.
- 2) Matoba discloses a system as was set forth above in part "A" of paragraph 2. More specifically, Matoba described a process in which the data to be recorded on the recording medium was divided into equal parts/portions and then the divided portions were recorded on the respective layers [i.e., @ Figure 4(c) and 5(c)]. As shown, this results in part of the data portion of largest amount being recorded with the data of lesser amount.
- 3) The examiner maintained that it would have been obvious to have modified the system of Ito et al. to divide the data in accordance with the teachings of Matoba to align both the head and tail portions of the recorded data in a vertical direction across layers. Such a modification would have provided significant advantages in systems having more than two layers [e.g., note figure 5(c)] wherein transitions between the layers occur at both ends of the data.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 7, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

The meaning of "application data," and the "dependence" of the dividing thereof, have not been defined in the claim. The data disclosed in Ito et al can clearly represent any type of data and, regardless of type, must be divided based thereon (e.g., based on the byte structure of the data).

14. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 8, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

The examiner takes Official Notice that it was well known in the multi-layer optical disc video recording art (e.g., DVDs), for the video data to have been divided amongst the layers based on natural breaks in the video data. The examiner maintains that it would have been obvious to have used the modified system of Ito et al. to record video data and to have divided the data amongst the layers in such a well known manner (i.e., via the natural breaks).

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 9, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

Data is inherently stored on an optical disc in units, the smallest of which are sectors [error correction codes included (note 512 in Figure 18 of Ito et al.)].

16. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 9, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

The examiner takes Official Notice that it was well known in the recording art to have filled those areas of a recorded data structure which are empty (i.e., which do not contain information content) with null/dummy data. The examiner maintains that it would have been obvious to have filled the empty portion of the data structure in Ito et al. (e.g., @ Figure 6) with such null/dummy data. Such a modification presents random playback errors (i.e., empty data from being detected as some sort of control data).

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,184,377 to Ito et al., for the same reasons that were set forth above for claim 9, in view of Japanese Patent Document #09/259438 to Matoba. Additionally:

The examiner takes Official Notice that it was well known in the video recording art not to have to have place the transition point between layers of a video signal at seamless locations and, as such, to have place them a non-seamless locations. It would have been obvious to have modified Ito et al. to comprise such a notoriously well known feature (i.e., to prevent interruption at seamless stream locations).

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. HARVEY whose telephone number is (571) 272-7345.

The examiner can normally be reached on M-F from 6:00AM to 3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Marsh D. Banks-Harold, can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DAVID E HARVEY/

Primary Examiner, Art Unit 2621

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